



BLAST—This is what happens to the air surrounding the muzzle of a gun when it is fired. Coming from the muzzle, shown at left center, are gases that are expelled. Long, dark, curved line shown at the right is the high pressure, or sound, wave. This is produced when the compressed gas in the barrel first begins to expand from the muzzle. The short, black, curved line at the top of the picture is a reflection of the sound wave from a metal plate. This picture was taken in only four-millionths of a second, by the Schlieren process.

PSYCHOLOGY

Morale Builders

► **SOLDIER** morale depends on two things: faith in his leaders and faith that the folks back home are backing him up, not only by buying war bonds but in their attitude and daily behavior, Dr. Edward A. Strecker of Philadelphia, consultant in psychiatry to the surgeons general of both Army and Navy, declared at the meeting of the Chicago Institute of Medicine.

"An army may march to its objective on its belly," he said, "but it takes its objective by its morale."

His contact with soldiers in and from various combat areas leads him to believe that almost irrespective of educational and cultural levels and before giving consideration to questions such as why we are fighting this war, we must satisfy the soldier's urgent need for faith in his leaders and in support from the home front.

"The morale barometer of troops in the field," he said on this last point, "dropped appreciably at the news of the coal and other strikes."

A skeleton neuropsychiatric organization capable of expansion in case of need should be kept in the Army after the war, no matter how small the peacetime Army may be, he said.

The surgeon general should be a member of the General Staff, he urged.

"It is incomprehensible," he declared, "that the surgeon general, who presides over the medical health and care of more than 8,000,000 men, should be under the line, which, if it chooses, may override his judgment in medical matters."

Turning to the future, he declared that the neuropsychiatric experience of this war teaches that we "must learn at once a sounder evaluation of democratic civilization and put it into practice before it is too late."

Although the considerable segment of young men discharged from the Army after a short trial of service and the larger segment rejected at induction are best described as temperamentally unsuited for military life, the records show, Dr. Strecker stated, that the majority had

not adjusted satisfactorily in civilian life.

"One makes no progress at all," he said, "by precipitating arguments as to whether these men are really sick. Of course they are sick, even if there should happen to be a considerable element of malingering in the situation.

"Much more important is it to know what the sickness expresses, its significance for democracy and, if possible, its origin."

Most of these men, he said, are not only unable but unwilling to serve. They show "a profound disturbance of the 'I and You' relationship."

Explaining, he pictured each individual as the center of a series of concentric circles representing his inalienable rights, which eventually expand to a point where they begin to impinge on the circles surrounding other individuals.

"The intermediate mutually held territory between I and You should be and in fact must be a land of fair give and take, of reasonable concession and of decent tolerance. While this area must necessarily have shifting boundaries, yet it is so significant that I do not think it is too much to say that the survival or the death of democracy will depend on a clearer understanding and a more accurate delineation of the I and You relationships enclosed in the area."

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final assembly line, they already carry gas tanks, two-and-a-half-ton main landing gear, and four giant nacelles.

Four assembly lines that move regularly send completed planes out the front door to be tested and flown. On each of these assembly lines a pair of ten-ton overhead cranes carries the 17-ton in-board wing section, all in one piece, and lowers it into place in a slot between the double bomb bay and nose section, with only quarter-inch tolerance. Finally the tail assembly is fitted on and pushed by the same workers who complete the final assembly. The completed B-29, weighing 120,000 pounds, is rolled out through the giant doors of the plant toward its first take-off on the road to Tokio.

There are more women than men employees at the Boeing-Wichita plant where the bulk of the B-29s are being fabricated. Most of the more than a million rivets that go into each plane are driven by women. Many were nurses, schoolteachers, students or housewives.

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